I. Amendments to the Claims

This listing of claims shall replace all prior versions, and listings, of claims in the application.

Listing of Claims

1-31. (Canceled)

32. (New) A wound treatment composition comprising (i) a solid substrate and (ii) an effective amount of a protonated/acidified nucleic acid to suppress or prevent bacterial infection, said protonated/acidified nucleic acid having the following structure:

A-B-C

wherein A is a 5' end blocking group;
wherein B is a 2'O-alkyl or 2'O-alkyl-n-(O-alkyl) oligoribonucelotide; and
wherein C is a 3' end blocking group.

33. (New) The wound treatment composition of claim 32, wherein the 5' end blocking group and the 3' end blocking group are independently selected from the group consisting of inverted bases, dideoxynucleotides, methylphosphates, alkyl groups, aryl groups, cordycepin, cytosine arabanoside, 2'-methoxy-ethoxy-nucleotides, phosphoramidates, peptide linkages, dinitophenyl groups, 2'-O-methyl bases with phosphorothioate linkages, 3'-O-methyl bases with phosphorothioate linkages, 3'-O-methyl bases, fluorescein, cholesterol, biotin, acridine, rhodamine, psoralen, and glyceryl.

34. (New) The wound treatment composition of claim 32, wherein the 2'O-alkyl or 2'O-alkyl-n-(O-alkyl) oligoribonucelotide is between about 1 and about 98 bases in length.

35. (New) The wound treatment composition of claim 32, wherein said composition is incorporated into a wound dressing, suture, adhesive, wound sealant or skin substitute.

36. (New) The wound treatment composition of claim 35, wherein said composition is incorporated into a wound dressing selected from the group consisting of an alginate, a composit, an exudate, an absorber, a foam, a gauze, a hydrocolloid and a hydrogel.

37. (New) The wound treatment composition of claim 36, wherein said composition is impregnated into the dressing or applied to the dressing as a coating.

38. (New) The wound treatment composition of claim 35, wherein said composition is incorporated into a suture comprising a material selected from the group consisting of surgical gut, collagen, homopolymers of p-dioxanone, copolymers of p-dioxanone, lactones, nylon, polypropylene, steel, polyvinylidene fluoride, linen, cotton, silk, polysester and combinations thereof.

39. (New) The wound treatment composition of claim 35, wherein said composition is incorporated into an adhesive comprising an acrylic polymer.

40. (New) The wound treatment composition of claim 35, wherein said composition is incorporated into a wound sealant comprising fibrinogen, a fibrinogen activator or combinations thereof.

41. (New) The wound treatment composition of claim 35, wherein said composition is incorporated into a skin substitute, said composition coated onto the surface of the skin substitute or interdispersed throughout the skin substitute.

42. (New) A method of treating a dermal wound on a patient comprising applying a wound treatment composition comprising (i) a solid substrate and (ii) an effective amount of a protonated/acidified nucleic acid to suppress or prevent bacterial infection, said protonated/acidified nucleic acid having the following structure:

A-B-C

wherein A is a 5' end blocking group;

wherein B is a 2'O-alkyl or 2'O-alkyl-n-(O-alkyl) oligoribonucelotide; and

wherein C is a 3' end blocking group, to the site of the wound.

43. (New) The method of claim 42, wherein the 5' end blocking group and the 3' end blocking group are independently selected from the group consisting of inverted bases, dideoxynucleotides, methylphosphates, alkyl groups, aryl groups, cordycepin, cytosine arabanoside, 2'-methoxy-ethoxy-nucleotides, phosphoramidates, peptide linkages, dinitophenyl groups, 2'-O-methyl bases with phosphorothioate linkages, 3'-O-methyl bases with phosphorothioate linkages, 3'-O-methyl bases, fluorescein, cholesterol, biotin, acridine, rhodamine, psoralen, and glyceryl.

44. (New) The method of claim 42, wherein the 2'O-alkyl or 2'O-alkyl-n-(O-alkyl) oligoribonucelotide is between about 1 and about 98 bases in length.

45. (New) The method of claim 42, wherein said composition is incorporated into a wound dressing, suture, adhesive, wound sealant or skin substitute.

46. (New) The method of claim 45, wherein aid composition is incorporated into wound dressing selected from the group consisting of an alginate, a composit, an exudate, an absorber, a foam, a gauze, a hydrocolloid and a hydrogel.

47. (New) The method of claim 46, wherein said composition is impregnated into the dressing or applied to the dressing as a coating.

48. (New) The method of claim 45, wherein said composition is incorporated into a suture comprising a material selected from the group consisting of surgical gut, collagen, homopolymers of p-dioxanone, copolymers of p-dioxanone, lactones, nylon, polypropylene, steel, polyvinylidene fluoride, linen, cotton, silk, polysester and combinations thereof.

49. (New) The method of claim 45, wherein said composition is incorporated into an adhesive comprising an acrylic polymer.

50. (New) The method of claim 45, wherein said composition is incorporated into a wound sealant comprising fibrinogen, a fibrinogen activator or combinations thereof.

51. (New) The method of claim 45, wherein said composition is incorporated into a skin substitute, said composition coated onto the surface of the skin substitute or interdispersed throughout the skin substitute.